

Application No.: 10/017,661Docket No.: V9661.0024AMENDMENTS TO THE CLAIMS

1. (Original) An apparatus to provide power to a plurality of light emitting diodes for producing a desired color and brightness, the apparatus comprising:

an inductor coupled in series with a first light emitting diode;

a second light emitting diode coupled in parallel to the inductor and the first light emitting diode such that the second light emitting diode is reverse biased when a power source drives a current through the inductor and the first light emitting diode; and

a switch controlling the connection of the inductor and the first light emitting diode to the power source.

2. (Original) The apparatus recited in claim 1 further comprising: a third light emitting diode coupled, in parallel to the first light emitting diode, to a first terminal and a second terminal of the power source.

3. (Original) The apparatus recited in claim 1 further comprising: a third light emitting diode coupled, in series to the first light emitting diode, to a first terminal and a second terminal of the power source.

4. (Previously Presented) An apparatus to provide power to drive a plurality of light emitting diodes, the apparatus comprising:

an inductor coupled in series with a first light emitting diode;

a switch controlling a connection of the inductor and the first light emitting diode to a power source; and

a first terminal and a second terminal of the power source connected in series to the inductor via the switch and at least one second light emitting diode, the at least one second light emitting diode having a forward voltage higher than input voltage across the first and second terminals;

Application No.: 10/017,661Docket No.: V9661.0024

wherein the second light emitting diode is connected in parallel to the switch and the first light emitting diode, and

wherein the second light emitting diode is coupled in series with the inductor and the power source.

5. (Original) The apparatus recited in claim 4 further comprising: a third light emitting diode coupled in parallel to the first and second input terminals.

6. (Original) The apparatus recited in claim 4 further comprising: a third light emitting diode coupled in series with the first or second terminals.

Claim 7 (Canceled).

Claim 8 (Canceled).

9. (Previously Presented) An apparatus to provide power to drive a plurality of light emitting diodes, the apparatus comprising:

a switching flyback power converter with a transformer;

one or more secondary windings coupled to the transformer;

one or more light emitting diodes coupled to each of said secondary windings such that power delivered by which is substantially consumed by said light emitting diodes; and

a bridge rectifier for converting an alternating current to a direct current; and means to operate the flyback converter to operate in discontinuous mode with current delivered by an alternating current source with phase angle following a corresponding alternating voltage.

10. (Previously Presented) An apparatus to provide power to drive a plurality of light emitting diodes, the apparatus comprising:

a switching bridge power converter with a transformer;

Application No.: 10/017,661Docket No.: V9661.0024

a plurality of secondary windings including at least a first secondary winding and a second secondary winding coupled to the transformer such that a first terminal of the first secondary winding has an opposite polarity to that of a first terminal of the second secondary winding;

a first and a second light emitting diode coupled together at their cathodes, wherein an anode of the first light emitting diode is connected to the first terminal of the first secondary winding and an anode of the second light emitting diode is connected to the first terminal of the second secondary winding; and

an inductor coupled to the cathodes of the first and the second light emitting diodes, the inductor further coupled to a second terminal of the first secondary winding and a second terminal of the second secondary winding via a third light emitting diode;

wherein the power delivered is substantially consumed by light emitting diodes.

11. (New) The apparatus recited in claim 1, wherein the inductor and the first light emitting diode are coupled to a first terminal and a second terminal of the power source respectively.

12. (New) The apparatus recited in claim 1, wherein the switch is coupled, in series to the first light emitting diode, to a first terminal and a second terminal of the power source.

13. (New) The apparatus recited in claim 1 further comprising a third light emitting diode coupled to a first terminal and a second terminal of the power source.